

Abstract

The defined boundaries in a network are pushed down to the base station level. Doing so necessitates authentication each time a wireless terminal switches communication, or "handoffs" from one base station to another. To achieve such authentication in an efficient manner, security information, i.e., the derived information, is transferred from one base station directly to another. By directly it is meant without accessing any other source of the derived information, although the information may be transferred via other intervening nodes of the network that form an interconnection path for the base stations. A simplified network, i.e., a network with reduced hierarchy from a control point of view, e.g., one that only requires home location register and base station network entities along with interconnection therefore, may be employed with a minimal decrease in performance, e.g., a minimal increase in delay, during the handoff process. In one embodiment of the invention, a first base station which initially receives a service request from a wireless terminal requests authentication information from a central security node and receives in response at least, one, but typically two or more, sets of security information. When it is time for a handoff from the first base station to a second base station, the first base station transmits to the second base station at least one of the sets of security information it received from the central security node. The second base station then uses the information it received from the first base station to authenticate the wireless terminal.

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